

Sonic Strokes and Musical Gestures: The Difference between Musical Affect and Musical Emotion

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ABSTRACT

Musicological theories traditionally address the expressive powers of music within a framework of signification, in which musical affect is considered as a meaningful musical gesture. Consequently, affect is regarded as a property of the music instead of as a bodily reaction of the listener. I will outline a different conception of musical affect that takes into account the bodily nature of perception. I will introduce the notion of sonic stroke, i.e. a sound that induces affect in the listener. A sonic stroke thus is responsible for the occurrence of musical affect. By relating the notion of sonic stroke to musical gesture the differences between the two can be articulated, as well as how they can be related to musical affect and musical emotion. I will conclude that musical emotion is the result of the interpretation of musical affect and that, while sonic strokes can induce musical affect, a musical gesture is the result of the listener's reflection on the music she is confronted with, a reflection that is initiated by a sonic stroke.

I. INTRODUCTION

"Music is the art which is most nigh to tears and memory," Oscar Wilde once wrote. In *Beyond Good and Evil*, Friedrich Nietzsche asserts that "[i]n music, the passions enjoy themselves." Alphonse de Lamartine holds music to be "the literature of the heart; it commences where speech ends," and Leo Tolstoy believes that "[m]usic is the shorthand of emotion." Poets, novelists and philosophers acknowledge the sensations music can elicit, and try to put these sensations into words. Although the manner in which they attempt to do so is rather informal and sometimes even naïve, at least they address this very important, and perhaps even the most important, aspect of music. In musicology, on the other hand, this phenomenon is seriously under-theorized.

According to the French philosopher Gilles Deleuze (2003) this sensation can be understood as an affect. In accordance with results obtained in recent empirical and cognitive research on perception, Deleuze argues that affect is an autonomous reaction of an observer's body when confronted with a particular perception. In this view, perception induces bodily reactions called affects in the observer. At first this affect has no meaning or signification yet, because it is entirely physical. This means that affect is not the same as emotion. Affect is physical, whereas emotion is cognitive. While affect is nothing but an energetic movement within the body, emotion is the interpretation of an affective reaction. Therefore, it is affect, not emotion, which creates the foundation of an aesthetic experience. Consequently, in order to comprehend this experience, a thorough understanding of affect is needed (Massumi, 2002a; 2002b).

In literary, art and film studies this so-called Deleuzian understanding of affect is productively applied in order to theorize the sensations literature, art and cinema can elicit, i.e. to analyze the affective potentialities of these media. In

contrast to most theories of art – which are typically derived from theories of signification – a Deleuzian approach does not presuppose that art is merely representational. Instead, it acknowledges that all art is expressive, not only because it is meaningful, but also because it affects the beholder in her body. This approach then enables the theorist to articulate the manner in which the relation between an artwork and its beholder is established. Scholars such as Jill Bennett (2005), Simon O'Sullivan (2006), Barbara Kennedy (2003), Brian Massumi (2002a), and of course Deleuze himself, have taken this approach in the analysis of art, cinema and literature so as to understand the impact of different forms of art on the beholder. No one has done this yet for the field of music.

Musicological theories traditionally address the expressive powers of music within a framework of signification. It seems rather peculiar that affect in music is considered within a framework of signification at all, for music is a medium in which signification is problematic, as I have argued elsewhere (Meelberg, 2006). Nonetheless, within this framework musical affect is considered as a meaningful musical gesture, i.e. a musical phrase that is marked for its significance (Hatten, 2004). Such a musical phrase is capable of evoking emotions with the listener as the result of the recognition of this meaning (Kivy, 1994). Consequently, affect is regarded as a property of the music, instead of as a sensation evoked in the listener. An understanding of musical affect as primarily motivated by signification excludes the human body from the experience of listening.

This is a strange omission, since recent empirical and cognitive research has shown that perception in general, and listening in particular, indeed has an important bodily aspect. Perception and listening can be regarded as acts in which the entire physicality of the perceiver is included (Hansen, 2004). Thus, perception is not a purely mental activity (Pfeiffer & Bongard, 2007). It can rather be understood as an interaction of a perceiving subject with the real world, involving and stimulating the body in particular ways, which provides the brain with the raw material that can be interpreted (Gallagher, 2005). However, despite its importance, in musicological thinking the bodily aspect of music listening has generally been neglected thus far.

Following a general turn in the humanities away from signification and towards affect and expression, I want to rethink the notion of musical affect. I aim to develop a concept of affect, based on Deleuzian premises, that takes into account the bodily nature of perception. In this way I intend to elucidate the relation between music, affect and the body. Also, I will think through the relation between musical affect and musical emotion and elaborate the relation between the two.

My approach thus consists in rethinking musical affect by incorporating the theory of affect as developed by Gilles

Deleuze, as well as results of relevant cognitive and empirical studies of music done by researchers such as Marc Leman, David Huron and Michael Thaut. In my elaboration of musical affect I will introduce the notion of sonic stroke, i.e. a sound that induces affect in the listener. A sonic stroke thus is responsible for the occurrence of musical affect. By relating the notion of sonic stroke to musical gesture the differences between the two can be articulated, as well as how they can be related to musical affect and musical emotion. I will conclude, in accordance with theorists such as Jesse J. Prinz, that affect is a sensation that might cause an emotion; emotion is a result of affect. Consequently, musical emotion is the result of the interpretation of musical affect. I will explain that while sonic strokes can induce musical affect, a musical gesture is the result of the listener's reflection on the music she is confronted with, a reflection that is initiated by a sonic stroke.

The paper's primary objective is to enrich musicological thinking by providing a new perspective on musical affect that takes into account the listener's bodily involvement in listening. Secondly, it may provide current cognitive and empirical studies of music with an alternative theoretical framework. Third, the notion of affect that I will develop here is to break the ground for future interdisciplinary comparative studies between the affective potentialities of music and of other media.

II. SONIC STROKES AS MUSICAL AFFECTION

According to Michael Thaut, music is related to core biological functions (2005, p. 57). Music creates a particular type of sensory input that is necessary for the regulation of arousal and activation states (p. 25). Music can even modulate the motor performance of a listener (pp. 110-112). In short: music does something with the listener, both with her body and with her brain.

David Huron also discusses the relation between music and human biology. He observes that music can evoke *frisson* with the listener, which are "chills running up and down your spine" (2006, p. 34). These chills are autonomous reactions of the listener's body when confronted with musical sounds. According to Huron, these reactions are correlated with two conditions: loud passages and passages that contain some kind of violation of expectation (p. 34).

Huron distinguishes between three kinds of violation of expectation: schematic, dynamic, and veridical surprise (p. 269). Schematic surprise is a violation of a schema that a listener involves in her listening experience. Surprise is created because a commonplace event is replaced by an event of lower probability. Dynamic surprise is a surprise that is set up by the work itself. It thus does not violate a schema, but contradicts the music that has been sounding up until that moment. A veridical surprise, lastly, violates the listener's existing knowledge of a work. An example of this kind of surprise might be a mistake a musician makes.

Huron explains that *frisson*, the listener's most immediate reaction to surprise, is originally related to fear. However, in the case of music listening, the listener feels "relief" when she realizes that it is just the musical sounds that elicit these reactions. And this relief causes a pleasurable feeling with the listener (p. 38). In other words: the initial reaction to the music is prepersonal, autonomous, without signification. All

forms of musical surprise act at an unconscious level, Huron stresses (p. 269). Only after the listener has consciously reflected on the sensations she may experience a pleasurable sensation.

Sounds thus can create autonomous reactions of the body. They can induce *frisson*, a bodily reaction that happens at an unconscious level. Sounds can move the listener's body – generate chills up and down the listener's spine – that motivate the listener to reflect on the sensations she is experiencing. I call those sounds that elicit such responses sonic strokes.

A stroke can be a slap, but a caress as well. Therefore, a sonic stroke can be both a sound that has an impact on the listener's body because of its volume, as Huron explains. Also, a sound can be a sonic stroke because it sounds very softly, or because it has a particular timbre or rhythm that, in some way, arouses the listener, for instance because it is surprising in a particular manner. In short: sonic strokes are acoustic phenomena that have an impact on the listener's body. Consequently, music affects the listener's body through sonic strokes.

When taken in view of Deleuze's work, sonic strokes can also be explored as an example of sensation. According to Deleuze, a sensation is violent because it acts on the observer's body (2003, p. 39), and it is precisely because art produces sensation by being sensation that art can have such a profound impact on the observer:

[A]t one and the same time I become in the sensation and something happens through the sensation, one through the other, one in the other. And at the limit, it is the same body which, being both object and subject, gives and receives the sensation. As a spectator, I experience the sensation only by entering the painting, by reaching the unity of the sensing and the sensed. [...] [S]ensation is not in the "free" or disembodied play of light and color (impressions); on the contrary, it is in the body, even the body of an apple. Color is in the body, sensation is in the body, not in the air. Sensation is what is painted. (p. 35)

Music, too, produces sensation by being sensation. It consists of sonic strokes, sounds that bring about sensations with the listener. Or, put differently: a sonic stroke is a sound that produces affect.

In the Deleuzian conception of affect, affect is an intensity (a term that is interchangeable with affect according to Deleuze and Massumi). More precisely, affect is a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body's capacity to act. It is an autonomous reaction of the body when confronted with another entity. And in music sonic strokes are able to elicit such a reaction. A sonic stroke is a sound that induces intensity with the listener.

III. MUSICAL GESTURES AS A CONSEQUENCE OF SONIC STROKES

A sonic stroke is not the same as a musical gesture, even though both sonic strokes and musical gestures are manners in which music can address the listener's body. However, they are not interchangeable. Rather, musical gestures can be considered as consequences of sonic strokes. The listener

registers musical gestures because they are announced, as it were, by sonic strokes.

According to Robert S. Hatten (2004), a musical gesture is a temporal unfolding of a succession of sounds that may be interpreted as significant. In other words, a musical gesture is a musical movement that is meaningful. Moreover, Hatten asserts that gesture is a movement that can be interpreted as a sign. It is a form of intentional or unintentional communication. A musical gesture feels like a unified, meaningful motion.

Rolf Pfeifer and Josh Bongard (2007) show that speaking about a musical gesture as a motion that can be felt is not just another metaphorical way of talking about musical listening. They remark that human subjects have so-called mirror neurons that fire when a subject performs a movement or observes a movement in another subject. Performing actions and observing actions activate the same brain areas. Watching movement thus can lead to sensing this movement within the subject's own body, as if the subject is actually performing this movement.

This is also the case when it concerns the perception of music, as the listener's body is involved in acts of musical listening. Of course, the body is literally touched by musical sounds, since the sound waves touch the eardrum and make it move. In this respect, hearing is more closely related to the sense of touch than to any of the other senses. However, the body is also included because it kinesthetically senses the gestures produced by the music. It feels the music by sensing its dynamic and temporal flow. The body mirrors the movement of the music.

This is corroborated by Marc Leman (2007), who argues that sound actually does something with the listener's body. The body kinesthetically senses, and subsequently processes, the dynamics, the physical properties, of sound and music. The body thus is literally moved by musical gestures; it kinesthetically moves along with the movement of sound.

The fact that the body is involved in the perception of music has important consequences for the meaningfulness of music listening. "When interacting with the real world," Pfeifer and Bongard remark, "the body is stimulated in very particular ways, and this stimulation provides, in a sense, the raw material for the brain to work with" (2007, p. 2). Perception, the manner in which a body comes into contact with the outside world, supplies the perceiving subject with the elements that subsequently can be turned into a genuine percept. According to Pfeifer and Bongard, the activity in which these elements are turned into a percept, an activity that they call categorization, is an elementary capacity of the mind. This categorization is determined by embodiment. The morphology and the material properties of a perceiving subject's body determine the formation of categories (p. 2). In other words, the body regulates the manner in which a subject makes distinctions in the world.

Mark Hansen calls this regulation the "framing" function of the body (2004, p. 11). The body enframes formless information (the elements or raw material provided by perception) and turns it into apprehensible form. Drawing on Henri Bergson, Hansen contends that information always needs a frame (p. 84). Information only constitutes meaning if it is enframed, contextualized. Unconstrained information is meaningless, because information needs some kind of

reference in order to become meaningful. In the case of perception, the body can act as such a reference.

According to both Bergson and Hansen, the body, as the primary enframer of information, functions as a filter that selects perceptions relevant to the body. This is a subtractive act, as the body takes relevant percepts from the unfiltered flux of perceptions. It introduces specific constraints on what can amount to relevant aspects of a percept (relevant to the body, that is), and the body is always functioning as this enframer during each perception.

Because the body is involved in all perception, perception is always contaminated. The perception of external objects is always blended with the perceiver's body, which implies that pure, objective, uncolored perception is impossible. The body is a prerequisite for perception, yet at the same time it impurifies perception, exactly because it enframes perception.

Consequently, the meaningfulness of a musical gesture is produced by the body that kinesthetically senses the musical gesture and determines the completeness of the gesture. In this way the body enframes the sounds, it gives them a reference by interpreting them as constituting a musical gesture. It turns the sounds into an impure, subjective experience.

As a result, the body is responsible for the listener's ability to structure the music. By identifying musical gestures the body divides the continuous stream of sounds into discrete units, namely musical gestures. These units can subsequently be related to each other, which results in the creation of a musical structure. The embodied perception of musical gesture offers a way to make sense of the music.

Sonic strokes play a crucial role in this process. As I remarked above, sonic strokes are acoustic phenomena that have an impact on the listener's body. They mark remarkable moments in the music. In this way, sonic strokes enframe musical gestures. Sonic strokes are acoustic markers that help the listener in recognizing and interpreting musical gestures. A sonic stroke is an impetus to thinking and reflection. It motivates the listener to reflect on the acoustic phenomena she is confronted with. It is an incitement to interpret the movement of sounds as meaningful gestures.

IV. MUSICAL EMOTION AND MUSICAL AFFECT

Affect has no meaning, no signification. It is unqualified emotion (Massumi, 2002a, p. 28). However, it is bodily, as Massumi stresses. Affect is energy, resonance, movement within the body (p. 25). It is an impetus to thought, to interpretation. Affect motivates the body to kinaesthetically sense the entity that produces the affect, a motivation to enframe the movement.

This interpretation leads to meaning. And as soon as there is meaning, affect has vanished. When this occurs, as Massumi explains, affect has changed into emotion, which is a subjective content. It is qualified affect, an intensity that is transformed into "narrativizable action-reaction circuits, into function and meaning" (p. 28). Affect is prepersonal and meaningless, whereas emotion is personal, subjective and meaningful, even though both are bodily phenomena. Affect is energy within the body, while, as Jesse J. Prinz suggests, emotions register changes on the subject's bodily states (2004, p. 56). It is in this sense that emotions can be treated as causal consequences of bodily changes.

According to Prinz, emotions use the subjects' bodies "to tell them how they are faring in the world" (p. 69). Emotions are like sensors that scan the subject's body for arousal and interpret this arousal in order to make it meaningful to the subject. Emotions are the result of the detection of an intensity, an affect, and the interpretation of this intensity (pp. 161-167). Sensation consequently propels the subject into physical and mental activity. The body is motivated to enframe the sensation, to make it meaningful by turning it into an emotion, while the mind is induced to thought, to interpretation.

In the case of music listening the affect is created by sonic strokes. Sonic strokes are the sensations through which the listener's body is confronted with another body (the entity called sound). Sonic strokes are responsible for the physical relation between music and the listener. The affect induced by this relation provokes the listener's body to do something with this sensation. The body is motivated to kinesthetically sense the movement of the sounds that caused the affect and to enframe it, to make it meaningful, perhaps even turn it into an emotion. This enframed, meaningful, and possibly emotional movement can be called a musical gesture.

V. CONCLUSION

The understanding of musical affect as developed in this paper, as well as the manner in which it is distinguished from musical emotion, has distinct possibilities the traditional conception of musical affect lacks. Firstly, it may facilitate the starting point for an intermedial study of affect. Up until now, affect has hardly been theorized in musicology. And in those rare cases when it is discussed at all, it is done in such an idiosyncratic, and in my view erratic, way that a productive comparison between musical affect and affect in other media is not really possible. The notion of musical affect that is discussed in this paper is interdisciplinary in nature, since it is derived from conceptions of affect developed in other media and in philosophy. Consequently, the intermediality of affect is already presupposed.

Furthermore, since affect is a crucial part of a musical experience, and not of a musical work itself, a clear concept of musical affect is necessary for a better understanding of musical experience in general. This understanding may serve as a starting point for new ways of doing empirical musical research, in which not the listener's mind, but the listener's body is the main focus. This development is already instigated by researchers such as Marc Leman, but I believe an even stronger focus on the listening body might greatly enhance our understanding of the process of music perception and music appreciation.

Also, this view on musical affect can serve as the basis of an exploration of the ethical aspect of sound. Sound has an ethical aspect since it acts on, and penetrates, the body. Music perception has an impact on the apprehending subject; it induces affects in the subject's body. This impact is ethical in nature, exactly because it is a penetration, positively or negatively, of the listener's body. Both listening and ethics have to do with the body: the vulnerable human body is the basis of all ethical thought, just as the body is indispensable for aural perception (Eagleton, 2003; McIntyre, 1999). Moreover, music perception has an impact on the apprehending subject; it induces affects in the subject's body.

Therefore, a thorough understanding of musical affect enables the study of the ethics of sound.

Lastly, this understanding can be used to revise music education. Current music education programs typically consider listening to music a purely mental activity. By acknowledging that the body plays an important part in the perception, interpretation and appreciation of music, these programs could be changed in order to properly address this aspect. Music education programs should teach listeners to literally "feel the music." In other words: music education should enhance the listener's sensibility to (musical) sounds. Therefore, the central question in music education should not just be: "What does this musical piece mean?" but also "How does the music influence me?" In this way, the pupil gains a better understanding of how music functions. In order to achieve this, she has to be taught to focus on the totality of sound, and not just those aspects of music that are considered important in Western music, i.e. melody and harmony. A sensibility to the totality of sound implies a sensibility to all musical parameters, so not only to pitch, but also to timbre, texture, dynamics and rhythm, as well as to the interaction of these parameters. For it is this interaction that establishes the affective potentiality of musical sounds.

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